

[Is Google Making Us Stupid? - Magazine - The Atlantic](#)

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- Over the past few years I've had an uncomfortable sense that someone, or something, has been tinkering with my brain, remapping the neural circuitry, reprogramming the memory. My mind isn't going—so far as I can tell—but it's changing. I'm not thinking the way I used to think
- I can feel it most strongly when I'm reading. Immersing myself in a book or a lengthy article used to be easy. My mind would get caught up in the narrative or the turns of the argument, and I'd spend hours strolling through long stretches of prose. That's rarely the case anymore
- Now my concentration often starts to drift after two or three pages. I get fidgety, lose the thread, begin looking for something else to do. I feel as if I'm always dragging my wayward brain back to the text. The deep reading that used to come naturally has become a struggle.
- [Scott Karp, who writes a blog about online media](#), recently confessed that he has stopped reading books altogether. "I was a lit major in college, and used to be [a] voracious book reader," he wrote. "What happened?" He speculates on the answer: "What if I do all my reading on the web not so much because the way I read has changed, i.e. I'm just seeking convenience, but because the way I THINK has changed?"
- As part of the five-year research program, the scholars examined computer logs documenting the behavior of visitors to two popular research sites, one operated by the British Library and one by a U.K. educational consortium, that provide access to journal articles, e-books, and other sources of written information. They found that people using the sites exhibited "a form of skimming activity," hopping from one source to another and rarely returning to any source they'd already visited.
- The authors of the study report:
It is clear that users are not reading online in the traditional sense; indeed there are signs that new forms of "reading" are emerging as users "power browse" horizontally through titles, contents pages and abstracts going for quick wins. It almost seems that they go online to avoid reading in the traditional sense.
- Thanks to the ubiquity of text on the Internet, not to mention the popularity of text-messaging on cell phones, we may well be reading more today than we did in the 1970s or 1980s, when television was our medium of choice. But it's a different kind of reading, and behind it lies a different kind of thinking—perhaps even a new sense of the self.
- the style of reading promoted by the Net, a style that puts "efficiency" and "immediacy" above all else, may be weakening our capacity for the kind of deep reading that emerged when an earlier technology, the printing press, made long and complex works of prose commonplace

- When we read online, she says, we tend to become “mere decoders of information.” Our ability to interpret text, to make the rich mental connections that form when we read deeply and without distraction, remains largely disengaged.
- People used to think that our mental meshwork, the dense connections formed among the 100 billion or so neurons inside our skulls, was largely fixed by the time we reached adulthood
- But brain researchers have discovered that that’s not the case. James Olds, a professor of neuroscience who directs the Krasnow Institute for Advanced Study at George Mason University, says that even the adult mind “is very plastic.” Nerve cells routinely break old connections and form new ones. “The brain,” according to Olds, “has the ability to reprogram itself on the fly, altering the way it functions.”
- As we use what the sociologist Daniel Bell has called our “intellectual technologies”—the tools that extend our mental rather than our physical capacities—we inevitably begin to take on the qualities of those technologies.
- the clock “disassociated time from human events and helped create the belief in an independent world of mathematically measurable sequences.” The “abstract framework of divided time” became “the point of reference for both action and thought.”
- the conception of the world that emerged from the widespread use of timekeeping instruments “remains an impoverished version of the older one, for it rests on a rejection of those direct experiences that formed the basis for, and indeed constituted, the old reality.”
- The process of adapting to new intellectual technologies is reflected in the changing metaphors we use to explain ourselves to ourselves. When the mechanical clock arrived, people began thinking of their brains as operating “like clockwork.” Today, in the age of software, we have come to think of them as operating “like computers.”
- the changes, neuroscience tells us, go much deeper than metaphor. Thanks to our brain’s plasticity, the adaptation occurs also at a biological level.
- The Internet, an immeasurably powerful computing system, is subsuming most of our other intellectual technologies. It’s becoming our map and our clock, our printing press and our typewriter, our calculator and our telephone, and our radio and TV.
- When the Net absorbs a medium, that medium is re-created in the Net’s image. It injects the medium’s content with hyperlinks, blinking ads, and other digital gewgaws, and it surrounds the content with the content of all the other media it has absorbed
- The result is to scatter our attention and diffuse our concentration
- for all that’s been written about the Net, there’s been little consideration of how, exactly, it’s reprogramming us. The Net’s intellectual ethic remains obscure.
- Google, says its chief executive, Eric Schmidt, is “a company that’s founded around the science of measurement,” and it is striving to “systematize everything” it does
- The company has declared that its mission is “to organize the world’s information and make it universally accessible and useful.” It seeks to develop “the perfect search engine,” which it defines as something that “understands exactly what you mean and gives you back exactly what you want.”
- In Google’s view, information is a kind of commodity, a utilitarian resource that can be mined and processed with industrial efficiency. The more pieces of information we can

“access” and the faster we can extract their gist, the more productive we become as thinkers.

- Where does it end? Sergey Brin and Larry Page, the gifted young men who founded Google while pursuing doctoral degrees in computer science at Stanford, speak frequently of their desire to turn their search engine into an artificial intelligence, a HAL-like machine that might be connected directly to our brains.
- In a [2004 interview with Newsweek](#), Brin said, “Certainly if you had all the world’s information directly attached to your brain, or an artificial brain that was smarter than your brain, you’d be better off.” Last year, Page told a convention of scientists that Google is “really trying to build artificial intelligence and to do it on a large scale.”
- Still, their easy assumption that we’d all “be better off” if our brains were supplemented, or even replaced, by an artificial intelligence is unsettling. It suggests a belief that intelligence is the output of a mechanical process, a series of discrete steps that can be isolated, measured, and optimized
- The idea that our minds should operate as high-speed data-processing machines is not only built into the workings of the Internet, it is the network’s reigning business model as well.
- Most of the proprietors of the commercial Internet have a financial stake in collecting the crumbs of data we leave behind as we flit from link to link—the more crumbs, the better. The last thing these companies want is to encourage leisurely reading or slow, concentrated thought. It’s in their economic interest to drive us to distraction.
- Just as there’s a tendency to glorify technological progress, there’s a countertendency to expect the worst of every new tool or machine
- In Plato’s *Phaedrus*, Socrates bemoaned the development of writing. He feared that, as people came to rely on the written word as a substitute for the knowledge they used to carry inside their heads, they would, in the words of one of the dialogue’s characters, “cease to exercise their memory and become forgetful.”
- Socrates wasn’t wrong—the new technology did often have the effects he feared—but he was shortsighted. He couldn’t foresee the many ways that writing and reading would serve to spread information, spur fresh ideas, and expand human knowledge (if not wisdom).
- As New York University professor [Clay Shirky](#) notes, “Most of the arguments made against the printing press were correct, even prescient.” But, again, the doomsayers were unable to imagine the myriad blessings that the printed word would deliver.
- Then again, the Net isn’t the alphabet, and although it may replace the printing press, it produces something altogether different.
- The kind of deep reading that a sequence of printed pages promotes is valuable not just for the knowledge we acquire from the author’s words but for the intellectual vibrations those words set off within our own minds.
- In the quiet spaces opened up by the sustained, undistracted reading of a book, or by any other act of contemplation, for that matter, we make our own associations, draw our own inferences and analogies, foster our own ideas.
- Deep reading, as Maryanne Wolf argues, is indistinguishable from deep thinking.
- In a [recent essay](#), the playwright [Richard Foreman](#) eloquently described what’s at stake:

- I come from a tradition of Western culture, in which the ideal (my ideal) was the complex, dense and “cathedral-like” structure of the highly educated and articulate personality—a man or woman who carried inside themselves a personally constructed and unique version of the entire heritage of the West. [But now] I see within us all (myself included) the replacement of complex inner density with a new kind of self—evolving under the pressure of information overload and the technology of the “instantly available.”
- As we are drained of our “inner repertory of dense cultural inheritance,” Foreman concluded, we risk turning into “pancake people’—spread wide and thin as we connect with that vast network of information accessed by the mere touch of a button.”
- In the world of *2001*, people have become so machinelike that the most human character turns out to be a machine. That’s the essence of Kubrick’s dark prophecy: as we come to rely on computers to mediate our understanding of the world, it is our own intelligence that flattens into artificial intelligence.

This message was sent to you by [Javier E](#) via Diigo